E/CONF.39/C/455
SUMMARY
3 Nov.1962
ORIGINAL : ENGLISH

UNITED NATIONS CONFERENCE
ON THE APPLICATION OF SCIENCE AND TECHNOLOGY
FOR THE BENEFIT OF THE LESS DEVELOPED AREAS

SUMMARY

Agenda Item: C.2

United States of America

MEETING HUMAN NEEDS THROUGH AGRICULTURAL AND FOOD PRACTICES

By Nevin S. SCRIMSHAW,
Head of Department of Nutrition,
Food Science and Technology,
Massachusetts Institute of Technology,
Cambridge, Massachusetts

Papers have been contributed to the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas as working papers for that Conference. They are published as presented by the contributors, and the contents and the views expressed are those of the contributors. (See notes overleaf.)

NOTES

1. Papers selected for inclusion in General Sessions will be available at the Conference in the following official languages of the United Nations: English, French, Russian and Spanish.

2. Papers selected for inclusion in Specialized Sessions will be available at the Conference in only one of the above official languages.

3. Summaries of all papers, as submitted by contributors, will be available at the Conference in the following official languages of the United Nations: English, French, Russian and Spanish.

4. Papers and summaries will not be available for general distribution in advance of the Conference. They will be published in advance in limited quantities only for the use of delegations of participating governments and of other authorized participants. Post-Conference publication and general distribution of the Conference Proceedings will follow United Nations practices as laid down by the United Nations Publications Board.

BEST COPY AVAILABLE

MEETING HUMAN NEEDS THROUGH AGRICULTURAL AND FOOD PRACTICES

Nevin S. Scrimshaw
Head of Department of Nutrition, Food Science and Technology
Massachusetts Institute of Technology
Cambridge, Massachusetts

1. Nearly all developing countries could successfully meet the nutritional needs of their populations by the application of available scientific and technical knowledge of the production, conservation, distribution and use of food. This would require the careful adaptation to local conditions of procedures found successful elsewhere, although there are many effective measures which governments and individuals can take immediately.

2. Food supplies can be increased by better conservation, including use of the older food preservation methods of drying, smoking, salting and thermal processing, as well as such newer procedures as refrigeration, freezing, vacuum drying and freeze drying. Antibiotic dips to extend shelf life and pasteurizing doses of ionizing radiation can also be employed. Construction of more adequate storage facilities, use of appropriate chemicals, newer packaging materials, improved sanitation and the more rapid and efficient distribution of food can prevent excessive losses due to rodents, insects and spoilage.

3. Enrichment of staple foods is a valuable and economical method of improving the nutritive value of the food supply. The enrichment of wheat flour with thiamine, riboflavin, niacin and iron has contributed to the disappearance of clinical vitamin deficiency disorders in the U.S. and a number of other countries. Similar enrichment of polished rice can eliminate beriberi from a region and corn meal so enriched will prevent the occurrence of pellagra. The addition of iodine to salt has helped to control endemic goiter in a number of countries. Possibilities for improving protein quality by supplying limiting amino acids in complementary foods or through the addition of synthetic amino acids should also be taken into account.

4. The introduction of new protein-rich foods for human feeding is another important way of meeting human nutritional needs in technically underdeveloped areas where the traditional protective foods are expensive and in short supply. The press cakes made from cotton, soya, sesame, sunflower seed, peanut and other oil seeds are particularly useful for combining with a cereal. Mixtures in which one-third of the protein comes from the oilseed meal, processed so as to minimize heat damage, and two-thirds from corn, sorghum, rice or wheat have a good protein value. Increased use of fresh fish from the sea or freshwater ponds is desirable. Flour made from whole fish can be an efficient source of protein readily available to many countries.

5. The increased use of chemicals in food and agriculture has been responsible for much of the increase in productivity per unit of land and per person engaged in agriculture, but chemicals may be misused in ways that create health hazards.

BEST COPY AVAILABLE

Legislation and laboratory controls have been established in most of the developed countries; many other areas lack restrictions on the use of possibly hazardous substances in foods. Such curbs are necessary to protect the public from intentional and non-intentional additives of a harmful nature. Furthermore, many foods contain natural toxic substances and should be processed or consumed in ways which eliminate or minimize adverse effects.

6. Meeting human needs through improved agricultural and food practices requires both knowledge and the means to apply it. For nutrition education to be effective, additional and more varied foods must be made available at prices the people can afford.

7. Agricultural extension agents, health workers, school teachers and social workers are needed to teach desired agricultural and health practices including the fundamentals of nutrition. It is important that government officials responsible for economic and political decisions affecting food and agriculture have the necessary basic technical knowledge. Highly trained professionals in the various specialities of agriculture and nutrition are also required to conduct research, organize training programs and help adapt knowledge from other areas to local conditions.

8. The most important factor in the development of a country is the dissemination of technical knowledge throughout all professional and social levels of the population. For this reason developing countries should place primary emphasis on the various types of education and training.

S - 1520 E - Nov.1962 - 1,600